

CME Globex Self-Match Prevention

CME Globex Self-Match Prevention (SMP) is optional functionality that allows a customer to prevent the matching of orders for accounts with common ownership, across different Executing Firms, within or across clearing firms.

Customers may submit orders and quotes with an SMP Identifier (SMP ID), and the platform will prevent the orders from trading when the SMP IDs match, by cancelling either the aggressing or resting order.

The customer can indicate whether to cancel the aggressing or resting order using the SMP Instruction in tag 8000-SelfMatchPreventionInstruction. Default behavior is to cancel the resting order.

- Tag 8000-SelfMatchPreventionInstruction will be returned on the corresponding Execution Reports.
- SMP does not prevent self-matches during implied trades or during the [pre-open and new price indication market states](#).
- In FIFO markets, SMP cancels the orders that **would** have executed. In all other markets, SMP cancels the orders that **could** have executed.

All users of CME Group Self Match Prevention agree that they have read and understand the functionality and limitations expressed in the CME Group Self Match Prevention [FAQ](#), Client Systems Wiki, as well as [Rule 534-Wash Trades Prohibited](#).



- Customer messages with unregistered SMP IDs, or SMP IDs that are not registered to the submitting Executing Firm, will be rejected. Customers receiving rejects should contact their Clearing Firm Admin and/or stop submitting orders with SMP ID(s) until the issue is resolved.
- Resting orders with an unregistered SMP ID will be eliminated after 4:30 pm CT Monday-Thursday and 9:30 am CT Sunday.



CME Direct SMP

CME Direct supports SMP and a [Self-Match Protection feature](#) at the firm and user level that only affects orders entered via CME Direct.

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Customer Registration

New Release and Certification Testing

Customer registration is required for testing in New Release. Contact your [Global Account Manager](#) to obtain registered New Release SMP IDs. New SMP IDs and updates are valid same-day after 8 pm CT.

Production

Customer registration is required for Production use. Customers may register their Executing Firm IDs and SMP ID via the [Firm Administrator Dashboard](#) (FADB). Customer registration is required to access FADB or contact your Global Account Manager for an offline registration. New SMP IDs and updates are valid same-day after 4:30 pm CT Monday-Thursday and 9:30 am CT Sunday. During these times, CME Globex will eliminate any resting orders with unregistered SMP IDs. Orders submitted with new or modified SMP IDs before activation will be **rejected**.

More than one account number can be associated with an SMP ID. All accounts using a single SMP ID must have common ownership.

Self-Match Prevention Identifier Attributes

- Randomly generated and universally unique number generated by CME Group
- Numeric and will not start with a zero
- 7 digits with no blank spaces

Partner Exchanges

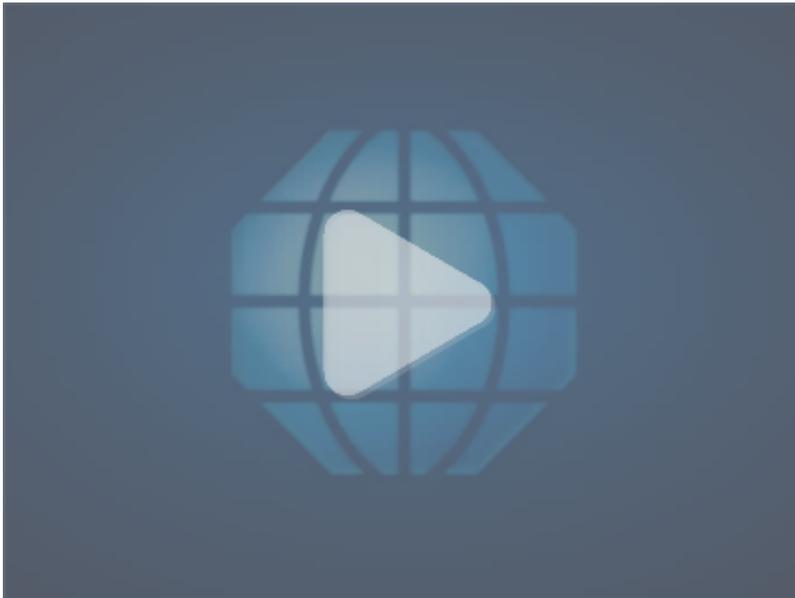
Self-Match Prevention functionality is applicable on the following Partner Exchange markets hosted on the CME Globex platform:

- Dubai Mercantile Exchange (DME)
- Minneapolis Grain Exchange (MGEX)
- Bursa Malaysia Derivatives (BMD)

Self-Match Prevention functionality is not applicable on Korea Exchange (KRX) markets.

Self-Match Prevention Video Overview

Watch this video for a quick overview of how SMP works.



Self-Match Prevention Functionality

Customers who opt to leverage Self-Match Prevention functionality by registering via the Firm Admin Dashboard will submit tag 7928-SelfMatchPreventionID on each quote and order message to prevent trading against an opposite side order with the same SMP ID.

When CME Globex detects a Buy order and a Sell order with the same SMP ID at the same executable price level, it automatically cancels the resting or incoming (aggressing) order(s) based on the [Self-Match Prevention Instruction](#). If the Self-Match Prevention Instruction is not submitted, CME Globex will cancel the resting order(s) by default and continue processing the incoming order.

The unsolicited cancel due to Self-Match Prevention is included in the CME Globex Messaging Efficiency Program with a pre-defined weighting factor = 3.

Self-Match Prevention Messaging

SMP prevents the matching of orders for accounts with common ownership if both the buy and sell orders contain the same Self-Match Prevention Identifier (SMP ID).

The SMP ID is sent in tag 7928-SelfMatchPreventionID and must be submitted on the following inbound application iLink messages by market participants on each quote and order to prevent self-trading:

- [New Order \(tag 35-MsgType=D\)](#)
- [Order Cancel-Replace Request \(tag 35-MsgType=G\)](#)
- [Mass Quote \(tag 35-MsgType=i\)](#)

- For the FIFO matching algorithm (tag 1142-MatchAlgorithm= F), SMP functionality is triggered when qualifying opposite side orders **will match** at a given price level.
- For all other matching algorithms, SMP functionality is triggered when qualifying opposite side orders **may potentially match** due to presence at a given price level.
- For Mass Quotes, if an SMP scenario is detected, all resting quotes in that group code are cancelled.

Self-Match Prevention Instruction

Self-Match Prevention instruction allows customers to indicate whether to cancel the resting or incoming (aggressing) order in the event of a self-match. To use SMP Instruction functionality, customers must submit tag 7928-SelfMatchPreventionID and tag 8000-SelfMatchPreventionInstruction on each order.

In the event of a self-match:

- Tag 8000 on the aggressing order always determines which order(s) is cancelled.
- When tag 8000 is not present on the aggressing order, the resting order(s) is cancelled.
- Tag 8000 on the resting order(s) do **not** determine which order(s) is cancelled.



For Mass Quotes, Self-Match Prevention instruction indicating to cancel the resting or incoming (aggressing) side is not available. If SMP functionality is triggered, only resting quotes are cancelled.

Tag 8000-SelfMatchPreventionInstruction can be submitted on the following messages and will be acknowledged back on the corresponding Execution Reports:

- [New Order Single \(tag 35-MessageType=D\)](#)
- [Order Cancel-Replace Request \(tag 35-MessageType=G\)](#)

If tag 8000-SelfMatchPreventionInstruction is sent in a client message other than New Order Single (35=D) or Order Cancel Replace Request (35=G), the message is accepted but tag 8000-SelfMatchPreventionInstruction is ignored and is not returned.

New Orders (35=D) and Order Cancel-Replace Requests (35=G) are rejected with a Session Level Reject (35=3) message when

- the tag value is greater than the max length
- the value is invalid

A modification to the value of tag 8000-SelfMatchPreventionInstruction does not cause the order to lose priority in the book. However, if tag 8000-SelfMatchPreventionInstruction is not present on the Cancel-Replace Request (35=G) message, CME Globex will remove the SMP Instruction from the resting order.

Self-Match Prevention ID and Self-Match Prevention Instruction

The following table illustrates how Self-Match Prevention functions based on the values for tag 7928-SelfMatchPreventionID and tag 8000-SelfMatchPreventionInstruction submitted in the originating message:

Originating Message		Execution Report		
SMP ID tag 7928 is present	SMP Instruction tag 8000 value	tag 7928 is returned	tag 8000 value	Result
Yes	N (New)	Yes	N (New)	Self-Match prevented Aggressing order cancelled
Yes	O (Old)	Yes	O (Old)	Self-Match prevented Resting order cancelled
Yes	Not sent	Yes	Not returned	Self-Match prevented Resting order cancelled
Yes	Invalid value	N/A	N/A	Session Level Reject sent for orders and cancel/replace Business Level Reject sent for Mass Quotes
Yes – unregistered or not registered to Executing Firm ID	Not sent	N/A	N/A	Session Level Reject sent for orders and cancel/replace Business Level Reject sent for Mass Quotes
No	N	No	Not returned	Self-Match occurs
No	O	No	Not returned	Self-Match occurs
No	Not sent	No	Not returned	Self-Match occurs

No	Invalid value	N/A	N/A	Session Level Reject sent for orders and cancel/replace Business Level Reject sent for Mass Quotes
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Values for Cancel Type Indicator

In the [Execution Report - Order Cancel \(tag 35-MsgType=8, tag 39-OrdStatus=4\)](#) message, tag 378-ExecRestatementReason indicates whether the resting or aggressing order was cancelled due to Self-Match Prevention.

Tag	Name	Req	Format	Values	Description
378	ExecRestatementReason	N	Int (3)	103=Cancel Oldest (Resting) due to Self-Match Prevention 107=Cancel Newest (Aggressing) due to Self-Match Prevention	Identifies origin of the order cancel.

In the [Quote Cancel Acknowledgment \(tag 35-MsgType=b\)](#) message, tag 9775-UnsolicitedCancelType=H indicates that quotes were cancelled due to Self-Match Prevention.



Note Regarding Stop Orders

If a triggered Stop order causes a Self-Match Event, the default behavior of cancel resting order applies, **unless** tag 8000=N, in which case the aggressor is canceled.

Order 1: Buy GEU0	10-lot @ 13	SMP Instruction - Cancel Resting SMP ID – 1234567 & FirmID - 400
Order 2: Triggered Stop acting as aggressing order Sell GEU0	20-lot @ 13	SMP Instruction - Cancel Aggressing SMP ID – 1234567 & FirmID - 400

Results:

Order 1—the resting buy order, remains on the order book.

Order 2—the aggressing sell order, is cancelled.



The aggressing order is cancelled regardless of quantity.

Scenarios

FIFO Market with SMP functionality configured across multiple CME Globex Firm IDs

This scenario illustrates a Self-Match event in a FIFO market.

SMP configuration:

- SMP ID: 1234567
 - Registered to Executing Firm IDs 400 and 600

A 1000 lot buy limit order at price 1302 is submitted with

- SMP ID 1234567
- Executing Firm ID 600 and
- Cancel Resting SMP Instruction.

Aggressing Buy Order Remaining Quantity	Resting Sell Orders		Action
	Order	SMP ID & FirmID	
1000	10 lot @ 1301	2345678 & 100	Executed 10 lot @1301
990	20 lot @ 1301	3456789 & 200	Executed 20 lot @1301
970	30 lot @ 1301	4567890 & 300	Executed 30 lot @1301

940	500 lot @ 1301	5678901 & 500	Executed 500 lot @1301
440	10 lot @ 1302	8765432 & 800	Executed 10 lot @1301
430	20 lot @ 1302	1234567 & 400 (Cancel Aggressing instruction)	The aggressing order's instructions take priority and the resting 20 lot order is cancelled.
430	30 lot @ 1302	7890123 & 700	Executed 30 lot @ 1302
400			The aggressing buy order's remaining 410 lot @ 1302 rests on the order book.

FIFO Market without Self-Match Event

This scenario illustrates a FIFO market without a Self-Match event. A 1000-lot buy order (SMP ID:1234567 and FirmID:400) is entered at 1302, with a 'Cancel Resting' instruction.

Aggressing Buy Order Remaining Quantity	Resting Sell Orders		Action
	Order	SMP ID & FirmID	
1000	10-lot @ 1301	2345678 & 100	Executed 10-lot @1301
990	20-lot @ 1301	3456789 & 200	Executed 20-lot @ 1301
970	30-lot @ 1301	4567890 & 300	Executed 30-lot @1301
940	500-lot @ 1301	5678901 & 500	Executed 500-lot @1301
440	450-lot @ 1302	6789012 & 600	Executed 440-lot @1302 Aggressing buy order is fully filled.
	20-lot @ 1302	1234567 & 400 (Cancel Resting instruction)	
	30-lot @ 1302	7890123 & 700	

FIFO Market with Cancel Resting

This scenario illustrates a Self-Match event in a FIFO market. A 1000-lot buy order (SMP ID:1234567 and FirmID:400) is entered at 1302, with a Cancel Resting instruction.

Aggressing Buy Order Remaining Quantity	Resting Sell Orders		Action
	Order	SMP ID & FirmID	
1000	10-lot @ 1301	2345678 & 100	Executed 10-lot @1301
990	20-lot @ 1301	3456789 & 200	Executed 20-lot @1301
970	30-lot @ 1301	4567890 & 300	Executed 30-lot @1301
940	500-lot @ 1301	5678901 & 500	Executed 500-lot @1301
440	10-lot @ 1302	6789012 & 600	Executed 10-lot @ 1302
430	20-lot @ 1302	1234567 & 400 (Cancel Aggressing instruction)	The aggressing order's instructions take priority and the resting 20-lot order is cancelled.
430	30-lot @ 1302	7890123 & 700	Executed 30-lot @ 1302
400			The aggressing buy order's remaining 400-lot @ 1302 rests on the order book.

Pro-Rata Market with Cancel Aggressing

This scenario illustrates a Self-Match event in a pro-rata market. A 1000-lot buy order (SMP ID:1234567 and FirmID:400) is entered at 1302, with a 'Cancel Aggressing' instruction.

Aggressing Buy Order Remaining Quantity	Resting Sell Orders		Action
	Order	SMP ID & FirmID	
1000	500-lot @ 1301	2345678 & 100	A potential self-match at price level 1302 is recognized and the Self-Match event is triggered even though the aggressing order would not have reached the resting self-match order. The aggressing order's instructions take priority and the entire aggressing order is cancelled.
0	300-lot @ 1301	3456789 & 200	
0	200-lot @ 1301	4567890 & 300	
0	500-lot @ 1301	5678901 & 500	
	20-lot @ 1302	1234567 & 400, Cancel Resting instruction	Resting order at same price with same SMP ID triggers the cancel of the aggressing order per the aggressing Instruction
	30-lot @ 1302	7890123 & 700	

Pro-Rata Market with Cancel Resting

This scenario illustrates a Self-Match event in a pro-rata market. A 1000-lot buy order (SMP ID:1234567 and FirmID:400) is entered at 1302, with a 'Cancel Resting' instruction.

Aggressing Buy Order Remaining Quantity	Resting Sell Orders		Action
	Order	SMP ID & FirmID	
1000	500-lot @ 1301	2345678 & 100	A potential self-match at price level 1302 is recognized and the Self-Match event is triggered even though the aggressing order would not have reached the resting self-match order. The aggressing order's instructions take priority and the resting order is cancelled even though it would not have matched. The aggressing order is then matched according to standard priority rules. Matched 500 @ 1301
500	300-lot @ 1301	3456789 & 200	Matched 300 @ 1301
200	200-lot @ 1301	4567890 & 300	Matched 200 @ 1301
0	500-lot @ 1301	5678901 & 500	
0	20-lot @ 1301	1234567 & 400, Cancel Resting instruction	Resting order at same price with same SMP ID triggers the cancel of the resting order per the aggressing Instruction

Feature File

Expand for a logical SMP scenario.

```

SMPID.feature

Feature: Self Trade Prevention Identification Tag

#####
#
# Self-Match prevention is an optional order/mass quote feature that prevents #
# two orders or quotes from the same Participating Organization or Member Firm #
# from executing against each other unintentionally based on a unique trading #
# key defined by the Participant/Member. #
# #
#####

```

Background:

Given the following:

* Instrument Group Configurations:

groupName
ZB

* Contracts:

symbol
T5F1

Scenario: test selfMatchPreventionID length of 11 and 12

Given the following events occur:

* these "new order" message(s) are sent to Globex:

selfMatchPreventionID	identifier	securityDescription	price	side	orderQty	timeInForce
length11	T5F1		101.0	bid	10	session
ABCDEFGHIJK						
length12	T5F1		102.0	bid	10	session
ABCDEFGHIJKL						

When the following events occur:

* these "cancel" message(s) are sent to Globex:

OrderId	securityDescription
length11	T5F1
length12	T5F1

Then the following should happen:

* expect execution message(s) with values:

messageType	securityDescription	price	side	orderQty
order ack	T5F1	101.0	bid	10
order ack	T5F1	102.0	bid	10

* expect execution message(s) with values:

messageType	securityDescription	price	side	orderQty	selfMatchPreventionID
cancel	T5F1	101.0	bid	10	ABCDEFGHIJK
cancel	T5F1	102.0	bid	10	ABCDEFGHIJKL

Scenario: selfMatchPreventionID with length greater than 13 characters

When the following events occur:

* these "new order" message(s) are sent to Globex:

ordType	securityDescription	price	side	orderQty	timeInForce	selfMatchPreventionID
limit	T5F1	101.0	bid	10	session	ABCDEFGHIJKLMNNNNNNNNNN

Then the following should happen:

* expect execution message(s) with values:

messageType	businessRejectReason	text
bus rej	5	%7928 (SELF_MATCH_PREVENTION_ID)% # % is wild card in the test framework

Scenario: selfMatchPreventionID is null

When the following events occur:

* these "new order" message(s) are sent to Globex:

ordType	securityDescription	price	side	orderQty	timeInForce	selfMatchPreventionID
limit	T5F1	100.0	bid	10	session	

Then the following should happen:

* expect execution message(s) with values:

messageType	businessRejectReason	text
bus rej	5	%7928 (SELF_MATCH_PREVENTION_ID)% # % is wild card in the test framework

Scenario: selfMatchPreventionID is all spaces

When the following events occur:

* these "new order" message(s) are sent to Globex:

ordType	securityDescription	price	side	orderQty	timeInForce	selfMatchPreventionID
limit	T5F1	105.0	ask	10	session	' '

Then the following should happen:

* expect execution message(s) with values:

messageType	businessRejectReason	text
bus rej	5	%Tag value is all spaces: 7928% # % is wild card in the test framework

Scenario: Test leading spaces

When the following events occur:

* these "new order" message(s) are sent to Globex:

ordType	securityDescription	price	side	orderQty	timeInForce	selfMatchPreventionID
limit	T5F1	105.0	ask	10	session	' abcdef'

Then the following should happen:

* expect execution message(s) with values:

messageType	securityDescription	price	selfMatchPreventionID
order ack	T5F1	105.0	' abcdef'

Scenario: Test selfMatchPreventionID with value '=' gets accepted

When the following events occur:

* these "new order" message(s) are sent to Globex:

ordType	securityDescription	price	side	orderQty	timeInForce	selfMatchPreventionID
limit	T5F1	105.0	ask	10	session	=

Then the following should happen:

* expect execution message(s) with values:

messageType	securityDescription	price	selfMatchPreventionID
order ack	T5F1	105.0	=

Scenario: Test upper/lower case and special characters are accepted

When the following events occur:

* these "new order" message(s) are sent to Globex:

ordType	securityDescription	price	side	orderQty	timeInForce	selfMatchPreventionID
limit	T5F1	105.0	ask	10	session	AsHr@F!

Then the following should happen:

* expect execution message(s) with values:

messageType	securityDescription	price	selfMatchPreventionID
order ack	T5F1	105.0	AsHr@F!